

JUL 03 2007

Attorney Docket No.: 1033-SS00406

REMARKS**Specification**

The Office has objected to an informality in paragraph [1001] of the specification. Applicants have amended paragraph [1001], which Applicants have relabeled [0001], per U.S. Pat. Pub. No. 2005/0055431. Accordingly, Applicants respectfully request withdrawal of the objection.

Applicants have amended paragraph [1015] to correct a typographical error. Applicants have relabeled the paragraph to be [0015], per U.S. Pat. Pub. No. 2005/0055431.

Claim Objections

The Office has objected to claim 6, at paragraph 1 of the Office Action, as lacking antecedent basis. Applicants have amended claim 6. Applicants respectfully request withdrawal of the objection.

35 U.S.C. §101 Claim Rejections

The Office has rejected claims 33-37, under 35 U.S.C. §101, at paragraph 2 of the Office Action, as being directed to non-statutory subject matter. The invention must recite a "useful, concrete and tangible result." *See State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 47 USPQ2d 1596. Applicants have amended claim 33 to more accurately reflect a useful and tangible result. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claim 5 is Allowable

The Office has rejected claim 5, at paragraph 4 of the Office Action, under 35 U.S.C. §102(b), as being anticipated by U.S. Patent No. 6,421,319 ("Iwasaki"). Applicants respectfully traverse the rejection.

None of the cited references, including Iwasaki, disclose or suggest the specific combination of claim 5. For example, Iwasaki does not disclose that data collected by a data

network report collector includes management information that includes equipment fault information for a bridging node configured to transfer data traffic to a first network, where the first network carries data traffic between a local area network and a wide area network, as recited in claim 5. In contrast to claim 5, Iwasaki discloses traffic monitoring apparatus for monitoring internet traffic through branch cables connected to T points between terminal adapters and digital service units, but Iwasaki does not disclose collecting equipment fault information. *See* Iwasaki, col. 2, lines 21-24. Hence, claim 5 is allowable.

Claims 1-4 are Allowable

The Office has rejected claims 1-4, at paragraph 6 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Iwasaki in view of U.S. Patent No. 6,453,016 ("Chea"). Applicants respectfully traverse the rejections.

None of the references, including Iwasaki, disclose or suggest the specific combination of claim 1. For example, the Office Action admits that Iwasaki does not disclose a network management system including a first connection to a wide area network configured to receive management information via a virtual connection from a data communication node, the management information including equipment failure information for a bridging node configured to generate the encapsulated data traffic, as recited in claim 1. *See* Office Action, paragraph 6. Chea does not disclose this element of claim 1. In contrast to claim 1, Chea discloses a remotely addressable maintenance unit (RAMU) for POTS, DSL, and POTS/DSL environments, and a system for locating and determining faults between a central office and a customer's house. *See* Chea, col. 3, lines 32-34, and 39-42. Chea does not disclose that the RAMU connects to a WAN. Therefore, Iwasaki and Chea, separately or in combination, do not disclose each and every element of claim 1. Hence, claim 1 is allowable.

Claims 2-4 depend from claim 1, which Applicants have shown to be allowable. Therefore Iwasaki and Chea do not disclose at least one element of each of claims 2-4. Hence, claims 2-4 are allowable, at least by virtue of their dependence from claim 1.

Further, the dependent claims recite additional features that are not disclosed by the cited references. For example, Chea does not disclose that the management information includes service level information for a transparent connection between the data communication node and the wide area network, and that the transparent connection is a Digital Subscriber Line (DSL) connection carrying Frame Relay packets encapsulated according to a DSL protocol, as recited in claim 2. In contrast, Chea discloses a remotely addressable maintenance unit for a POTS/DSL environment, but Chea does not disclose a DSL connection carrying Frame Relay packets encapsulated according to a DSL protocol. *See* Chea, col. 3, lines 32-34. Further, Iwasaki does not disclose this element of claim 2. Instead, Iwasaki discloses a network traffic monitoring system to monitor internet traffic on a frame relay physical line between a terminal adaptor and a digital service unit. *See* Iwasaki, col. 1, lines 49-52, and col. 2, lines 37-39. Iwasaki does not disclose a DSL connection carrying Frame Relay packets encapsulated according to a DSL protocol. For this additional reason, claim 2 is allowable.

Claims 7-9 are Allowable

The Office has rejected claims 6-9, at paragraph 7 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Iwasaki in view of Chea. Applicants have canceled claim 6 without prejudice or disclaimer. Applicants respectfully traverse the remaining rejections.

As explained above, Iwasaki does not disclose each of the elements of claim 5. Chea does not disclose the elements of claim 5 that are not disclosed by Iwasaki. For example, Chea does not disclose that the management information further includes equipment fault information for a bridging node configured to transfer the data traffic to a first network that carries data traffic between a local area network and a wide area network, as recited in claim 5. In contrast to claim 5, Chea discloses a system that locates and determines faults between a central office and a customer's house. *See* Chea, col. 3, lines 39-42. Therefore, Iwasaki and Chea, separately or in combination, do not disclose each and every element of claim 5, or of claims 7-9, which depend from claim 5.

Further, the dependent claims recite additional features that are not disclosed by the cited references. For example, Chea does not disclose that data traffic is communicated between a

local area network (LAN) and a wide area network (WAN) according to a first protocol and that a bridging node encapsulates the data traffic from the local area node according to a second protocol, as recited in claim 7, or that the first protocol is a frame relay type protocol and the second protocol is a DSL protocol, as recited in claim 8. Instead, Chea discloses a remotely addressable maintenance unit for POTS/DSL environment, but does not disclose that data traffic is communicated between a LAN and a WAN, or the use of multiple protocols, e.g., frame relay and DSL. *See* Chea, col. 3, lines 32-34. Further, Iwasaki does not disclose these elements of claims 7 and 8. Instead, Iwasaki discloses a network traffic monitoring system to collect statistical information and to monitor the traffic suitable for a WAN, but Iwasaki does not disclose a DSL network, or the use of two protocols e.g., frame relay and DSL. *See* Iwasaki, col. 1, lines 38-40. For this additional reason, claims 7 and 8 are allowable.

Claims 11-15 are Allowable

The Office has rejected claims 11-15, at paragraph 8 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Iwasaki in view of Chea. Applicants have canceled claim 14 without prejudice or disclaimer. Applicants respectfully traverse the remaining rejections.

None of the references, including Iwasaki and Chea, disclose the specific combination of claim 11. For example, Chea does not disclose collecting management information for a transparent connection carrying data traffic, wherein the transparent connection is a Digital Subscriber Line (DSL) connection between a local area network and a wide area network, as recited in claim 11. In contrast to claim 11, Chea discloses a method for locating and determining faults between a central office and a customer's house. *See* Chea, col. 3, lines 39-42. Chea does not disclose a transparent connection that is a DSL connection between a LAN and a WAN. In further contrast to claim 11, Iwasaki discloses monitoring a frame relay/leased network between terminal adaptors and digital service units, but Iwasaki does not disclose a transparent DSL connection. *See* Iwasaki, col. 2, lines 36-39. Therefore, Iwasaki and Chea, separately or in combination, do not disclose or suggest each and every element of claim 11. Hence claim 11 is allowable.

Claims 12-13 and 15 depend from claim 11, which Applicants have shown to be allowable. Therefore Iwasaki and Chea do not disclose at least one element of each of claims 12-13 and 15. Hence, claims 12-13 and 15 are allowable, at least by virtue of their dependence from claim 11.

Claims 16-17 and 21-25 are Allowable

The Office has rejected claims 16-17 and 21-25, at paragraph 9 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Iwasaki in view of Chea. Applicants respectfully traverse the rejections.

None of the references, including Iwasaki and Chea, disclose or suggest the specific combination of claim 16. For example, Iwasaki does not disclose a network management system configured to collect management information for one or more transparent DSL connections carrying encapsulated Frame Relay packets, as recited in claim 16. In contrast to claim 16, Iwasaki discloses monitoring a frame relay/leased network between terminal adaptors and digital service units, but Iwasaki does not disclose a transparent DSL connection. *See* Iwasaki, col. 2, lines 36-39. In further contrast to claim 16, Chea discloses a remotely addressable maintenance unit for a DSL and a POTS/DSL environment and a system that locates and determines faults between a central office and a customer's house. *See* Chea, col. 3, lines 32-34, 39-42. Chea does not disclose a network management system collecting management information for a DSL connection carrying encapsulated Frame Relay packets. Therefore, Iwasaki and Chea, separately or in combination, do not disclose each and every element of claim 16. Hence, claim 16 is allowable.

Claims 17 and 21-25 depend from claim 16, which Applicants have shown to be allowable. Therefore, Iwasaki and Chea, separately or in combination, fail to disclose or suggest at least one element of each of claims 17 and 21-25. Hence claims 17 and 21-25 are allowable, at least by virtue of their dependence from claim 16.

Further, the dependent claims recite additional features that are not disclosed by the cited references. For example, Iwasaki does not disclose that the encapsulated Frame Relay packets

are carried on a virtual circuit between a Frame Relay transmitter and a Frame Relay receiver, and that the Frame Relay transmitter and the Frame Relay receiver are implemented as channel service unit/data service units (CSU/DSU), as recited in claim 25. In contrast to claim 25, Iwasaki discloses a frame relay/leased network that includes a higher-speed relay router, a switching unit and transmission lines, but Iwasaki does not disclose a Frame Relay transmitter and receiver implemented as a CSU/DSU, or encapsulated Frame Relay packets that are carried on a virtual circuit. *See* Iwasaki, col. 2, lines 20-21. In further contrast, to claim 25, Chea discloses a remotely addressable maintenance unit for POTS, DSL, and POTS/DSL environments, but Chea does not disclose sending or receiving encapsulated Frame Relay packets carried on a virtual circuit, or a Frame Relay transmitter and receiver implemented as a CSU/DSU. *See* Chea, col. 3, lines 32-35, and 39-42. For this additional reason, claim 25 is allowable.

Claims 26-32 are Allowable

The Office has rejected claims 26-32, at paragraph 10 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Iwasaki in view of Chea. Applicants respectfully traverse the rejections.

None of the references, including Iwasaki and Chea, disclose the specific combination of claim 26. For example, Chea does not disclose a middleware server configured to collect management information for a transparent Digital Subscriber Line (DSL) connection via a Frame Relay network, as recited in claim 26. In contrast to claim 26, Chea discloses a remotely addressable maintenance unit for POTS, DSL, and POTS/DSL environments and a system for locating and determining faults between a central office and a customer's house, but Chea does not disclose collecting information via a Frame Relay network. *See* Chea, col. 3, lines 32-35, and 39-42. In further contrast to claim 26, Iwasaki discloses monitoring a frame relay/leased network between terminal adaptors and digital service units, but Iwasaki does not disclose collecting information for a DSL connection via a Frame Relay network. *See* Iwasaki, col. 2, lines 23-25. Therefore, Iwasaki and Chea, separately or in combination, do not disclose each and every element of claim 26. Hence, claim 26 is allowable.

Further, the dependent claims recite additional features that are not disclosed by the cited references. For example, Chea does not disclose that the management information is used to differentiate between customer equipment failure and a service level agreement violation, as recited in claim 30. The Office Action admits that Iwasaki does not disclose monitoring customer equipment failure. *See* Office Action, paragraph 10. Further, Chea does not disclose this element of claim 30. In contrast to claim 30, Chea discloses determining faults between the central office and a customer's house, but does not disclose collecting information pertaining to service levels. *See* Chea, col. 3, lines 39-42. For this additional reason, claim 30 is allowable.

Claims 33-37 are Allowable

The Office has rejected claims 33-37, at paragraph 11 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Iwasaki in view of Chea. Applicants respectfully traverse the rejections.

None of the references, including Iwasaki and Chea, disclose the specific combination of claim 33. For example, Chea does not disclose differentiating between a network outage caused by customer equipment failure and a service provider service level event using the management information, as recited in claim 33. In contrast to claim 33, Chea discloses determining faults between the central office and a customer's house, but does not disclose collecting information pertaining to service levels. *See* Chea, col. 3, lines 39-42. Further, the Office Action admits that Iwasaki does not disclose monitoring equipment failure information. *See* Office Action, paragraph 11. Hence, Iwasaki does not disclose differentiating between a network outage caused by customer equipment failure and a service provider service level event using the management information. Therefore, Iwasaki and Chea, separately or in combination, do not disclose each of the elements of claim 33. Hence, claim 33 is allowable.

Claims 34-37 depend from claim 33, which Applicants have shown to be allowable. Therefore, Iwasaki and Chea, separately or in combination, fail to disclose or suggest at least one element of each of claims 34-37. Hence claims 34-37 are allowable, at least by virtue of their dependence from claim 33.

Further, the dependent claims recite additional features that are not disclosed by the cited references. For example, Iwasaki does not disclose that management information is collected via a virtual circuit from one of the Frame Relay data communication nodes, where the virtual circuit communicates according to a Frame Relay protocol, as recited in claim 36. Iwasaki does not disclose use of a virtual circuit. Further, the Office Action admits that Iwasaki does not disclose monitoring equipment fault information. *See* Office Action, paragraph 11. Additionally, Chea does not disclose use of a virtual circuit to collect management information, as recited in claim 36. Instead, Chea discloses use of a remotely addressable maintenance unit that is connected to DSL or POTS via a copper pair. *See* Chea, col. 4, line 65 – col. 5, line 3, and col. 5, lines 14-21. For this additional reason, claim 36 is allowable.

Claim 10 is Allowable

The Office has rejected claims 10, at paragraph 11 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Iwasaki in view of Chea, and further in view of U.S. Patent No. 6,430,273 (“Shaheen”). Applicants respectfully traverse the rejections.

As explained above, Iwasaki does not disclose each of the elements of claim 5. Chea does not disclose the elements of claim 5 that are not disclosed by Iwasaki. For example, Chea does not disclose that data collected by a data network report collector includes management information that includes equipment fault information for a bridging node configured to transfer data traffic to a first network, where the first network carries data traffic between a local area network and a wide area network, as recited in claim 5. Instead, Chea discloses a system for verifying connections between a central office and remotely addressable units, and for locating and determining faults between the central office and a customer’s house. *See* Chea, col. 3, lines 35-42. Chea does not disclose data collected that includes equipment fault information for a bridging node that transfers data traffic to a first network carrying data between a LAN and a WAN. Further, Shaheen does not disclose this element of claim 5. Instead, Shaheen discloses a system for providing a bi-directional DSL connection that includes a digital subscriber line access multiplexer (DSLAM) and switching logic. *See* Shaheen, Abstract. Shaheen does not disclose collecting data by a data network report collector. Therefore, Iwasaki, Chea and

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Shaheen, separately or in combination, do not disclose each of the elements of claim 5, or of claim 10, which depends from claim 5. Hence, claim 10 is allowable.

Claims 18-20 are Allowable

The Office has rejected claims 18-20, at paragraph 11 of the Office Action, under 35 U.S.C. §103(a), as being unpatentable over Iwasaki and Chea, and further in view of Shaheen. Applicants respectfully traverse the rejections.

As explained above, Iwasaki and Chea do not disclose each of the elements of claim 16. Shaheen does not disclose the elements of claim 16 not disclosed by Iwasaki and Chea. For example, Shaheen does not disclose a network management system configured to collect management information for one or more transparent DSL connections carrying encapsulated Frame Relay packets, as recited in claim 16. Rather, Shaheen discloses a system for providing a bi-directional DSL connection to a network with a number of inputs connected to DSL lines that extend to customer premises. *See* Shaheen, col. 1, lines 50-54. Shaheen does not disclose a network management system configured to collect management information. Therefore, Iwasaki, Chea and Shaheen, separately or in combination, do not disclose each of the elements of claim 16, or of claims 18-20, which depend from claim 16.

CONCLUSION

Applicants have pointed out specific features of the claims not disclosed, suggested, or rendered obvious by the references applied in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of each of the objections and rejections, as well as an indication of the allowability of each of the pending claims.

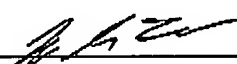
Any changes to the claims in this amendment, which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

The Examiner is invited to contact the undersigned attorney at the telephone number listed below if such a call would in any way facilitate allowance of this application.

The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-2469.

Respectfully submitted,

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Date


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